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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,647	03/29/2004	Jac-Ryong Park	1594.1317	9581
21171	7590	07/05/2007	EXAMINER	
STAAS & HALSEY LLP			HECKERT, JASON MARK	
SUITE 700			ART UNIT	
1201 NEW YORK AVENUE, N.W.			PAPER NUMBER	
WASHINGTON, DC 20005			1746	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/810,647	Applicant(s) PARK ET AL.	
	Examiner Jason Heckert	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/26/07 in regards to the 102(b) and 103(a) rejections in view of Oh, Na et al., and Seo et al. have been fully considered but they are not persuasive. The applicant has added a "guide unit" to the limitations of claim 1, but does not provide any structure further limiting said guide unit. This limitation is incredibly broad. The shaft part coupled with the shaft hole functions to restrict and guide motion, and can therefore read on guide unit. Or, as stated in the previous rejection, the upper periphery of the seat recesses 22 can as well. In regards to claim 6, Na discloses a rotatable pulsator that slidably contacts with an upper periphery of the seat recesses 22. Examiner feels that this is a functional equivalent to the applicant's guide part, in that it forms a boundary for the rotation of the pulsating device. As stated in the previous rejection, this periphery is integrally formed, and is considered mounted. Merely including another structure to mount a guide part that functions as a boundary for the rotation of the pulsating device, cannot be considered to be patentably distinct. Lastly, in regards to the guide step, Na already discloses guiding the pulsating device. Merely including a projection or step, to guide the pulsating device, cannot be considered patentably distinct because a functional equivalent already exists in the prior art.
2. Applicant's arguments, see page 5, filed 4/26/07, with respect to the rejection under 35 U.S.C. 102(b) as being anticipated by Roh et al. have been fully considered and are persuasive in view of applicant's amendment. The rejection of claim 1 has been withdrawn.

3. Applicant's arguments, see page 5, filed 4/26/07, with respect to the rejection under 35 U.S.C. 112 have been fully considered and are persuasive in view of applicant's amendment. The rejections of claim 6-7 and 13-15 have been withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 9-11 rejected under 35 U.S.C. 102(b) as anticipated by Oh or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oh in view of Na et al. Oh discloses a water tub 10, a rotary drum 20, pulsators 34, and a rotation guide comprising a frictional driving wheel 32 (a functional equivalent to a gear) mounted on the water tub, pinions 37, and a plurality of radially arranged rotating blades 34 (a functional equivalent to a plate with blades) attached to a rotating shaft wherein the shaft connects the blades to the pinions. The pulsators are arranged around the axis of rotation. Oh further discloses, as seen in figure 3, a shaft coupled to a shaft hole readable on guide unit, in that it guides movement of each pulsator.

3. In the alternative, Oh discloses a friction wheel, not a ring gear. Oh also does not disclose the blades of the pulsator being mounted on a plate. Na et al. disclose the interchangeability of friction wheels and gears (col. 3 lines 26-30) as well as pulsators containing blades mounted on plates (figure 4). It would have been obvious at the time of the invention, to modify Oh and include a gear in place of the friction plate, as they

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are obvious variants as disclosed by Na et al., and further include pulsators in the form of blades mounted on rotating plates, also disclosed by Na et al., as they are a known construction of a pulsating device.

4. Claims 4, 6-8, 12-15 rejected under 35 U.S.C. 103(a) as obvious over Oh in view of Na et al and further in view of Seo. Oh does not disclose a seat for the pulsator. Na et al. disclose a seat in the form of concave recesses 22 in the rotary drum (figure 1).

Further included is a guide unit comprising a guide part or surface, as in the upper periphery of the recess that is slidably contacting the plate 48, wherein the recess comprises a central hole extending from the guide part/surface to the base of the recess therefore creating a shaft guide part. Examiner feels that this is a functional equivalent to the applicant's guide part, in that it forms a boundary for the rotation of the pulsating device. The guide part is integrally formed, or mounted, in the recess. Merely including another structure to mount a guide part that functions as a boundary for the rotation of the pulsating device, cannot be considered to be patentably distinct. In regards to claim 13, both the upper surface and a portion of the step into the recess contact the rotating plate. Merely including a projection or step, to guide the pulsating device, cannot be considered patentably distinct because a functionally equivalent guide part already exists in the prior art. The guide surface is in the shape of a circle. In regards to claims 7 and 14, neither Oh nor Na discloses the use of bushings. Bushings are notoriously well known in the art for their use in tubes or holes to reduce friction and their use cannot be considered novel. Seo discloses the previous use of a bushing member on the shaft of a pulsator (col 2 lines 6-10), as well as the use of bushings on the

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machine's drive washing shaft (col4 lines 50-55). It would have been obvious at the time of the invention, to modify Oh and include a seat and guide unit, as disclosed by Na, to control and restrain the movement of the pulsator and further include bushings on the pulsator shaft, as disclosed by Seo, to reduce friction in between the shaft and tube.

5. Claim 16 rejected under 35 U.S.C. 103(a) as obvious over Oh in view of Na et al. as applied to claim 2 above and further in view of Cho. Neither Oh nor Na discloses a convex pulsator. Cho discloses the use of a convex pulsator 410. It would have been obvious to modify Oh in view of Na, as described above, and further include a convex pulsator, as described by Cho, as it is an obvious and well-known construction in pulsator design.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH



MICHAEL BARR
SUPERVISORY PATENT EXAMINER